

Claims:

1 1. A method for scheduling data packets comprising:
2 segmenting each data packet into data segments;
3 assigning a slack value to each data segment of a
4 packet, where the slack value is a function of a deadline of
5 the packet and an estimated transmission time of the packet;
6 and
7 scheduling data segments for transmission based on
8 slack values of data segments.

1 2. The method according to claim 1, further
2 comprising:

3 decreasing the slack value of a segment if a
4 transmission opportunity is missed.

1 3. The method according to claim 1, wherein the slack
2 value is measured in terms of the amount of transmission
3 opportunities that can be missed.

1 4. The method according to claim 1, further
2 comprising:

3 looking ahead to locate packets which will exceed
4 requirements and deleting such packets.

1 5. A transmission apparatus comprising:
2 a plurality of data streams;
3 a transmitter connected to said plurality of data

streams;

a scheduler for determining which data stream will be serviced by said transmitter;

said scheduler selecting a data stream for service based on a slack value of data segments in each stream, wherein the slack value is a function of the deadline and the estimated transmission time.

6. The apparatus according to claim 5, wherein said scheduler segments data packets in said data streams into data segments.

7. The apparatus according to claim 5, wherein said scheduler decreases slack values when a transmission opportunity is missed.

8. The apparatus according to claim 5, further comprising a slack value assigner for assigning said slack values to said data segments.

9. The method of transmitting data comprising:
connecting a transmitter to a plurality of data streams for transmission;
assigning slack values to data in said data streams, said slack value being a function of a deadline of said data and an estimated transmission time; and

1 scheduling the data streams for transmission by said
2 transmitter, said scheduling being determined by said slack
3 values.

1 10. The method according to claim 9, wherein data
2 packets in said data streams are segmented into data
3 segments.

1 11. The method according to claim 10, wherein slack
2 values are assigned to each data segment.

1 12. The method according to claim 11, wherein each
2 slack value is decreased for every transmission opportunity
3 missed.